



# Volunteer Lake Assessment Program Individual Lake Reports

## TARLETON, LAKE, PIERMONT, NH

### MORPHOMETRIC DATA

Watershed Area (Ac.):	4,807	Max. Depth (m):	20	Flushing Rate (yr <sup>-1</sup> )	1.1	Year	Trophic class	KNOWN EXOTIC SPECIES
Surface Area (Ac.):	315	Mean Depth (m):	8.5	P Retention Coef:	0.56	1979	OLIGOTROPIC	
Shore Length (m):	6,000	Volume (m <sup>3</sup> ):	10,881,500	Elevation (ft):	1305	1991	OLIGOTROPIC	

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

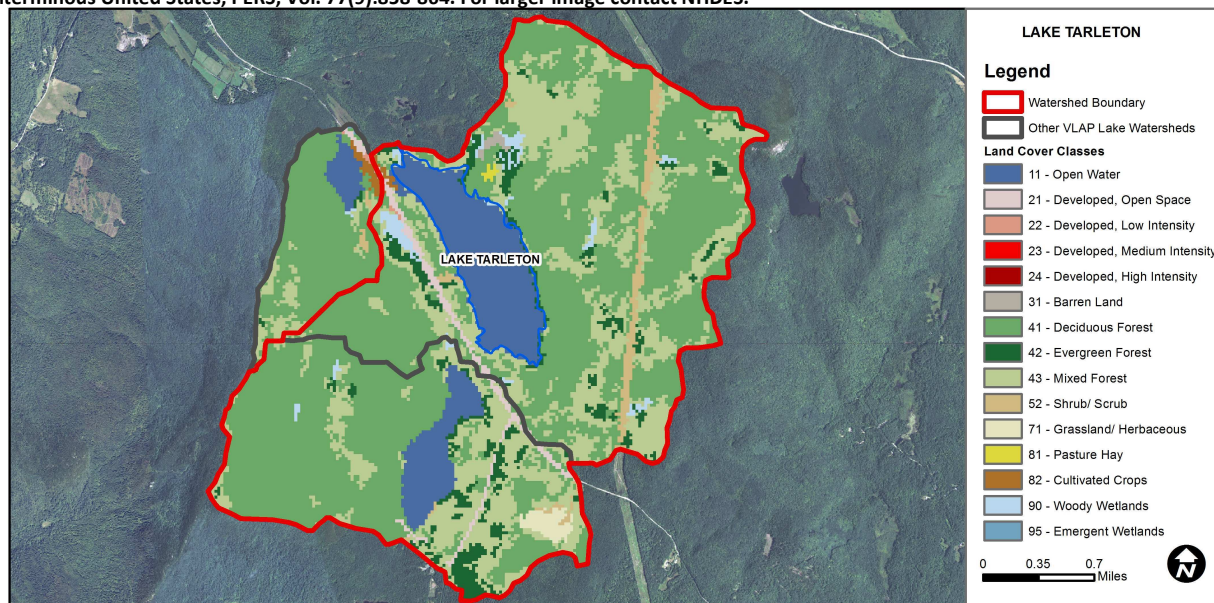
Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
Primary Contact Recreation	E. coli	Bad	>=1 exceedance(s) of geometric mean criterion and/or >=2 exceedances of single sample criterion, with 1 or more >2X criteria.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

### BEACH PRIMARY CONTACT ASSESSMENT STATUS

LAKE TARLETON - LAKE TARLETON STATE PARK BEACH	E. coli	Cautionary	One exceedance of single sample criteria but not enough data to calculate geometric mean. More data needed.
LAKE TARLETON - KINGSWOOD CAMP BEACH	E. coli	Cautionary	One exceedance of single sample criteria but not enough data to calculate geometric mean. More data needed.

### WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	10.6	Barren Land	0.18	Grassland/Herbaceous	0.65
Developed-Open Space	1.48	Deciduous Forest	53.27	Pasture Hay	0.09
Developed-Low Intensity	0.03	Evergreen Forest	4.94	Cultivated Crops	0.13
Developed-Medium Intensity	0	Mixed Forest	25.35	Woody Wetlands	1.2
Developed-High Intensity	0	Shrub-Scrub	1.95	Emergent Wetlands	0



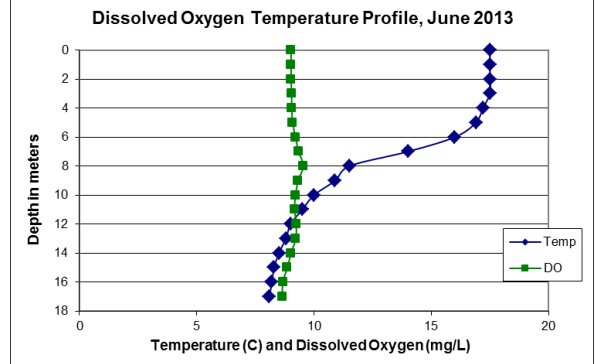
# VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

## TARLETON LAKE, PIERMONT, NH

### 2013 DATA SUMMARY

#### OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphics)

- CHLOROPHYLL-A:** Chlorophyll levels were very low throughout the summer and well below the state median. Historical trend analysis indicates relatively stable chlorophyll with moderate variability between years.
- CONDUCTIVITY/CHLORIDE:** Deep spot conductivity levels were low and approximately equal to the state median. Historical trend analysis indicates stable epilimnetic conductivity with low variability between years.
- E. COLI:** Public Beach and Launch E. coli levels were well below state standards for public beaches and surface waters.
- TOTAL PHOSPHORUS:** Deep spot phosphorus levels were low throughout the summer and well below the state median. Historical trend analysis indicates stable epilimnetic phosphorus with low variability between years.
- TRANSPARENCY:** Transparency improved slightly as the summer progressed and the viewscope transparency was much greater than non-viewscope transparency. Historical trend analysis indicates relatively stable transparency with moderate variability between years.
- TURBIDITY:** Deep spot turbidity was low throughout the summer.
- pH:** pH decreases to undesirable levels in the hypolimnion. However, historical trend analysis indicates significantly increasing (improving) epilimnetic pH since monitoring began.
- DISSOLVED OXYGEN:** Dissolved oxygen levels were sufficient to support aquatic life throughout the water column in June.
- RECOMMENDED ACTIONS:** Water quality has remained stable in recent years. Keep up the great work!



**NH Water Quality Standards:** Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

**Chloride:** < 230 mg/L (chronic)  
**E. coli:** > 88 cts/100 mL – public beach  
**E. coli:** > 406 cts/100 mL – surface waters  
**Turbidity:** > 10 NTU above natural level  
**pH:** 6.5-8.0 (unless naturally occurring)

**NH Median Values:** Median values for specific parameters generated from historic lake monitoring data.

**Alkalinity:** 4.9 mg/L  
**Chlorophyll-a:** 4.58 mg/m<sup>3</sup>  
**Conductivity:** 40.0 uS/cm  
**Chloride:** 4 mg/L  
**Total Phosphorus:** 12 ug/L  
**Transparency:** 3.2 m  
**pH:** 6.6

Station Name	Alk.	Chlor-a	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	#/100ml	ug/l	NVS	VS	ntu	
Epilimnion	4.00	0.78	42.6		3	4.42	6.00	0.49	6.87
Metalimnion			44.0		4			0.53	6.69
Hypolimnion			47.4		4			0.38	6.41
Public Beach				1					
Public Launch				1					

#### HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
pH	Improving	Data significantly increasing.	Chlorophyll-a	Stable	Trend not significant; data moderately variable.
Conductivity	Stable	Trend not significant; data show low variability.	Transparency	Stable	Trend not significant; data moderately variable.
			Phosphorus (epilimnion)	Stable	Trend not significant; data show low variability.

